UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,910	07/30/2003	Roy Lillqvist	60091.00217	6100

32294 7590 03/09/2007

SQUIRE, SANDERS & DEMPSEY L.L.P.
14TH FLOOR
8000 TOWERS CRESCENT
TYSONS CORNER, VA 22182

EXAMINER	
ADAMS, CHARLES D	
ART UNIT	**PAPER NUMBER**
2164	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/629,910	LILLQVIST ET AL.	
	Examiner	Art Unit	
	Charles D. Adams	2164	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 December 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Remarks

1. In response to communications filed on 13 December 2006, claims 16-20 are added per applicant's request. Claims 1-20 are pending in the application.

Claim Objections

2. Claim 4 is objected to because of the following informalities: Claim 4 discusses 'a condition', while claim 1 refers to 'a predetermined condition'. It is unclear if claim 4 is beginning a new set of conditions, or if claim 4 is referring to the predetermined condition of claim 1.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-4 and 9-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shen (US Pre-Grant Publication 2001/0010690) in view of Kim et al. (US Pre-Grant Publication 2002/0083198).

As to claim 1, Shen teaches:

Receiving data to be supplied to database operations, the data including at least one Internet domain name comprising a plurality of successive labels separated by dots, said at least one Internet domain name being in a first format (see paragraph [0031]);

Shen does not teach conditionally converting at least one of said at least one Internet domain name into a second format in which at least two successive labels of the at least one of said at least one Internet domain name are combined to form a single label, wherein the conditionally converting comprises converting the Internet domain name when the Internet domain name fulfills a predetermined condition; and

Kim et al. teaches conditionally converting at least one of said at least one Internet domain name into a second format in which at least two successive labels of the at least one of said at least one Internet domain name are combined to form a single label, wherein the conditionally converting comprises converting the Internet domain name when the Internet domain name fulfills a predetermined condition (see paragraphs [0034]-[0035]. Conversion only occurs if the number entered contains a '#' sign); and

Supplying the data to the database operations, the supplied data including at least one Internet domain name in the second format (see paragraphs [0034]-[0035]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Shen by the teaching of Kim et al., since Kim et al. teaches that "the telephone terminal is regarded as a miniaturized Internet host that accommodates all the various services in the Internet. Therefore, it

corresponds the telephone number to an IP address" and ""the telephone terminal has been settled down as a perfect Internet host, not as a simple service access terminal. Therefore, such a new idea that a telephone number corresponds directly to an IP address may be important and have a very high effective in the future Internet environment" (see paragraphs [0005]-[0006]).

As to claim 2, Shen as modified teaches:

Examining whether an Internet domain name fulfills the predetermined condition in the first format (see Kim et al. paragraph [0034]).

As to claim 3, Shen as modified teaches wherein the examining step includes examining whether said Internet domain name includes at least a predetermined number of labels beyond a given origin, said labels having a predetermined maximum length (see Kim et al. paragraphs [0030] and [0034]. If there is more than one distinct label, they will be separated. The labels have a predetermined max length of 15 digits).

As to claim 4, Shen as modified teaches wherein a condition upon which the converting is conditional is whether the Internet domain name includes at least the predetermined number of labels beyond the given origin, such that the converting is performed for said Internet domain name when the examining indicates that the Internet domain name includes at least the predetermined number of labels beyond the given origin, said labels having the predetermined maximum length, and the converting is not

performed when the examining indicates that the Internet domain name does not include at least the predetermined number of labels (see Kim et al. paragraphs [0034]-[0035]. If there is more than one label, the name is converted to a single label).

As to claim 9, Shen teaches:

First means for receiving data to be supplied to database operations, the data including at least one Internet domain name comprising a plurality of successive labels separated by dots, said at least one Internet domain name being in a first format (see paragraph [0031]);

Shen does not teach second means for conditionally converting at least one of said at least one Internet domain name into a second format in which at least two successive labels of the at least one of said at least one Internet domain name are combined to form a single label, wherein the second means is configured to convert the Internet domain name when the Internet domain name fulfills a predetermined condition; and

Kim et al. teaches second means for conditionally converting at least one of said at least one Internet domain name into a second format in which at least two successive labels of the at least one of said at least one Internet domain name are combined to form a single label, wherein the second means is configured to convert the Internet domain name when the Internet domain name fulfills a predetermined condition (see paragraphs [0034]-[0035]. Conversion only occurs if the number entered contains a '#' sign); and

Shen as modified teaches third means for supplying the data to database operations, the supplied data including at least one Internet domain name in the second format (see paragraphs [0034]-[0035]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Shen by the teaching of Kim et al., since Kim et al. teaches that "the telephone terminal is regarded as a miniaturized Internet host that accommodates all the various services in the Internet. Therefore, it corresponds the telephone number to an IP address" and ""the telephone terminal has been settled down as a perfect Internet host, not as a simple service access terminal. Therefore, such a new idea that a telephone number corresponds directly to an IP address may be important and have a very high effective in the future Internet environment" (see paragraphs [0005]-[0006]).

As to claim 10, Shen as modified teaches:

Fourth means for examining whether an Internet domain name fulfills the predetermined condition, the second means being configured to convert the Internet domain name into the second format when the Internet domain name fulfills the predetermined condition (see Kim et al. paragraph [0034]).

As to claim 11, Shen teaches:

A first interface configured to receive data to be supplied to database operations, the data including at least one Internet domain name comprising a plurality of

successive labels separated by dots, said at least one Internet domain name being in a first format (see paragraph [0031]);

Shen does not teach a modification module, operably connected to the first interface, configured to conditionally convert at least one of said at least one Internet domain name into a second format in which at least two successive labels of the at least one of said at least one Internet domain name form a single label, wherein the modification module is configured to convert the Internet domain name when the Internet domain name fulfills a predetermined condition; and

Kim et al. teaches a modification module, operably connected to the first interface, configured to conditionally convert at least one of said at least one Internet domain name into a second format in which at least two successive labels of the at least one of said at least one Internet domain name form a single label, wherein the modification module is configured to convert the Internet domain name when the Internet domain name fulfills a predetermined condition (see paragraphs [0034]-[0035]. Conversion only occurs if the number entered contains a '#' sign); and

Shen as modified teaches:

A second interface, operably connected to the modification module, configured to supply the data to database operations, the supplied data including at least one Internet domain name in the second format (see paragraphs [0034]-[0035]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Shen by the teaching of Kim et al., since Kim et al. teaches that "the telephone terminal is regarded as a miniaturized Internet

host that accommodates all the various services in the Internet. Therefore, it corresponds the telephone number to an IP address" and ""the telephone terminal has been settled down as a perfect Internet host, not as a simple service access terminal. Therefore, such a new idea that a telephone number corresponds directly to an IP address may be important and have a very high effective in the future Internet environment" (see paragraphs [0005]-[0006]).

As to claim 12, Shen teaches:

Receiving data to be supplied to database operations, the data including at least one Internet domain name comprising a plurality of successive labels separated by dots, said at least one Internet domain name being in a first format (see paragraph [0031]);

Shen does not teach:

Conditionally converting at least one of said at least one Internet domain name into a second format in which at least two successive labels of the at least one of said at least one Internet domain name are combined to form a single label, wherein the conditionally converting comprises converting the Internet domain name when the Internet domain name fulfills a predetermined condition; and

Kim et al. teaches:

Conditionally converting at least one of said at least one Internet domain name into a second format in which at least two successive labels of the at least one of said at least one Internet domain name are combined to form a single label, wherein the

conditionally converting comprises converting the Internet domain name when the Internet domain name fulfills a predetermined condition (see paragraphs [0034]-[0035]. Conversion only occurs if the number entered contains a '#' sign); and

Shen as modified teaches:

Supplying the data to the database operations, the supplied data including at least one Internet domain name in the second format (see paragraphs [0034]-[0035]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Shen by the teaching of Kim et al., since Kim et al. teaches that "the telephone terminal is regarded as a miniaturized Internet host that accommodates all the various services in the Internet. Therefore, it corresponds the telephone number to an IP address" and ""the telephone terminal has been settled down as a perfect Internet host, not as a simple service access terminal. Therefore, such a new idea that a telephone number corresponds directly to an IP address may be important and have a very high effective in the future Internet environment" (see paragraphs [0005]-[0006]).

As to claim 13, Shen teaches:

A receiver unit configured to receive data to be supplied to database operations, the data including at least one Internet domain name comprising a plurality of successive labels separated by dots, said at least one Internet domain name being in a first format (see paragraph [0031]);

Shen does not teach:

A conversion unit configured to convert at least one of said at least one Internet domain name into a second format in which at least two successive labels of the at least one of said one Internet domain name are combined to form a single labels;

Kim et al. teaches:

A conversion unit configured to convert at least one of said at least one Internet domain name into a second format in which at least two successive labels of the at least one of said one Internet domain name are combined to form a single labels (see paragraphs [0034]-[0035]. Conversion only occurs if the number entered contains a '#' sign);

Wherein the conversion unit is configured to convert the Internet domain name when the Internet domain name fulfills a predetermined condition (see paragraphs [0034]-[0035]. Conversion only occurs if the number entered contains a '#' sign); and

Shen as modified teaches:

A supply unit configured to supply the data to database operations, the supplied data including at least one Internet domain name in the second format (see paragraphs [0034]-[0035]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Shen by the teaching of Kim et al., since Kim et al. teaches that "the telephone terminal is regarded as a miniaturized Internet host that accommodates all the various services in the Internet. Therefore, it corresponds the telephone number to an IP address" and ""the telephone terminal has been settled down as a perfect Internet host, not as a simple service access terminal.

Therefore, such a new idea that a telephone number corresponds directly to an IP address may be important and have a very high effective in the future Internet environment" (see paragraphs [0005]-[0006]).

As to claim 14, Shen as modified teaches:

An examination unit configured to examine whether an Internet domain name fulfills a predetermined condition, the conversion unit being configured to convert the Internet domain name into the second format when the Internet domain name fulfills the predetermined condition (see paragraphs [0034]-[0035]. Conversion only occurs if the number entered contains a '#' sign).

As to claim 15, Shen teaches:

First interface means for receiving data to be supplied to database operations, the data including at least one Internet domain name comprising a plurality of successive labels separated by dots, said at least one Internet domain name being in a first format (see paragraph [0031]);

Shen does not teach:

Modification means, operably connected to the first interface means, for conditionally converting at least one of said at least one Internet domain name into a second format in which at least two successive labels of the at least one of said at least one Internet domain name form a single label, wherein the modification means is

configured to conditionally convert the Internet domain name when the Internet domain name fulfills a predetermined condition; and

Kim et al. teaches:

Modification means, operably connected to the first interface means, for conditionally converting at least one of said at least one Internet domain name into a second format in which at least two successive labels of the at least one of said at least one Internet domain name form a single label, wherein the modification means is configured to conditionally convert the Internet domain name when the Internet domain name fulfills a predetermined condition (see paragraphs [0034]-[0035]. Conversion only occurs if the number entered contains a '#' sign); and

Shen as modified teaches:

Second interface means, operably connected to the modification means, for supplying the data to database operations, the supplied data including at leats one Internet domain name in the second format (see paragraphs [0034]-[0035]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Shen by the teaching of Kim et al., since Kim et al. teaches that "the telephone terminal is regarded as a miniaturized Internet host that accommodates all the various services in the Internet. Therefore, it corresponds the telephone number to an IP address" and ""the telephone terminal has been settled down as a perfect Internet host, not as a simple service access terminal. Therefore, such a new idea that a telephone number corresponds directly to an IP

address may be important and have a very high effective in the future Internet environment" (see paragraphs [0005]-[0006]).

As to claim 16, Shen as modified teaches wherein the method is configured to enhance database performance in a domain name system (see Shen paragraph [0031], "to keep the amount of data to be transferred to a minimum, service control point SCP first removes the dots used in Internet addresses to separate number blocks").

As to claim 17, Shen as modified teaches wherein the system comprises fourth means for enhancing the performance of a domain name system (see Shen paragraph [0031], "to keep the amount of data to be transferred to a minimum, service control point SCP first removes the dots used in Internet addresses to separate number blocks").

As to claim 18, Shen as modified teaches wherein the name server is configured to provide enhanced performance for a domain name system (see Shen paragraph [0031], "to keep the amount of data to be transferred to a minimum, service control point SCP first removes the dots used in Internet addresses to separate number blocks").

As to claim 19, Shen as modified teaches wherein the system is configured to provide enhanced performance for a domain name system (see Shen paragraph [0031], "to keep the amount of data to be transferred to a minimum, service control point SCP first removes the dots used in Internet addresses to separate number blocks").

As to claim 20, Shen as modified teaches wherein the name server further comprises enhancement means for enhancing the performance of a domain name system (see Shen paragraph [0031], "to keep the amount of data to be transferred to a minimum, service control point SCP first removes the dots used in Internet addresses to separate number blocks").

5. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shen (US Pre-Grant Publication 2001/0010690) in view of Kim et al. (US Pre-Grant Publication 2002/0083198).

As to claim 5, Shen as modified does not explicitly teach wherein the predetermined number of labels is three.

However, it would have been obvious for one skilled in the art at the time the invention was made to have further modified Shen to include that limitation, because only a size (predetermined number of labels) is changing between the claimed invention and the prior art (see *In re Rose,* 220 F .2d 459, 105 USPQ 237 (CCPA 1955), *In re Rinehart*, 531 F .2d 1048, 189 USPQ 143 (CCPA 1976), *Gardner v. TEC Systems, Inc.*, 725 F .2d 1338, 220 USPQ 777 (FED Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984) and MPEP 2144.04 IV.A – Changes in Size/Proportion).

As to claim 6, Shen as modified does not teach wherein the predetermined maximum length is one byte.

However, it would have been obvious for one skilled in the art at the time the invention was made to have further modified Shen to include that limitation, because only a size (predetermined maximum length) is changing (see *In re Rose,* 220 F .2d 459, 105 USPQ 237 (CCPA 1955), *In re Rinehart*, 531 F .2d 1048, 189 USPQ 143 (CCPA 1976), *Gardner v. TEC Systems, Inc.*, 725 F .2d 1338, 220 USPQ 777 (FED Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984) and MPEP 2144.04 IV.A – Changes in Size/Proportion)).

As to claim 7, Shen as modified does not teach wherein the predetermined maximum length is one byte.

However, it would have been obvious for one skilled in the art at the time the invention was made to have further modified Shen to include that limitation, because only a size (predetermined maximum length) is changing (see *In re Rose,* 220 F .2d 459, 105 USPQ 237 (CCPA 1955), *In re Rinehart*, 531 F .2d 1048, 189 USPQ 143 (CCPA 1976), *Gardner v. TEC Systems, Inc.*, 725 F .2d 1338, 220 USPQ 777 (FED Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984) and MPEP 2144.04 IV.A – Changes in Size/Proportion)).

6. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shen (US Pre-Grant Publication 2001/0010690) in view of Kim et al. (US Pre-Grant

Publication 2002/0083198), and further in view of Khello et al. (US Pre-Grant Publication 2003/0007482).

As to claim 8, Shen as modified teaches a method according to claim 1.

Shen does not teach:

-receiving data including another Internet domain name in the second format; and

-converting the another Internet domain name received in the second format back to the first format.

Khello et al. teaches:

-receiving data including another Internet domain name in the second format (see paragraph [0055] and Figure 8. Numbers are entered in a format of a single label); and

-converting the another Internet domain name received in the second format back to the first format (see paragraph [0055] and Figure 8. Numbers entered in a format of a single label are converted to numbers comprised of multiple labels).

Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to have modified Shen by the teaching of Khello et al., since Khello et al. teaches that "the present invention may be used to establish a multimedia or other communications session that includes one or more of the following example applications: voice-over-IP, web surfing, e-mail, videoconferencing, video-on-

demand, audio-on-demand, intranet-work access, gaming, and gambling, either with or without a circuit switched voice communication" (see paragraph [0054]).

Response to Arguments

7. Applicant's arguments with respect to claims 1, 9, and 11-12 have been considered but are moot in view of the new ground(s) of rejection.

Examiner has withdrawn the 35 U.S.C. 112 2nd and 4th paragraph rejections of the previous office action.

Applicant argues that the answer to the question "how big?" requires a dimension and is thus an inappropriate to determined a number of labels in a document. In response to this argument, the question "How big is that domain name address?" could be answered with "20 characters" or "four labels". As such, the number of labels in an address could be a matter of size. "Size" is also indicative of the size of memory taken up, as in an example where memory space for three labels must be allocated instead of memory space for two labels. In addition to this, Kim et al. requires that there be at least two labels for conversion. One of ordinary skill in the art would recognize that it would be obvious to simply change the conditional number of labels such that only addresses with at least three labels are converted.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Khello et al. provides motivation to do so in paragraph [0054]. Motivation to practice Khello et al.'s invention provides a motivation for one of ordinary skill in the art to take the teachings of Khello et al. and combine them with another reference. The various applications described in Khello et al. would indicate to one of ordinary skill in the art that Khello et al.'s teachings can be used in a variety of network applications.

Applicant argues that Kim et al. and Khello et al. are not from the "same field of endeavor" as the present application. In response to this argument, Examiner notes that the claimed subject matter is directed towards string manipulation for use with database operations and that both Kim et al. and Khello et al. manipulate strings for use with database operations. This is the same field of endeavor.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles D. Adams whose telephone number is (571) 272-3938. The examiner can normally be reached on 8:30 AM - 5:00 PM, M - F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Charles Adams
AU2164
CA

Primary Examiner